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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/611,447	07/06/2000	Guo-Qiang Wang	91436-265	6335

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EXAMINER

MILLS, DONALD L

ART UNIT PAPER NUMBER

2662

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/611,447

Applicant(s)

WANG ET AL.

Examiner

Donald L. Mills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10, 16, 18-20, 22 and 23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 16, 18-20, 22, and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-5, 16, and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 1, 3, 16, 20 the claim specifies *wherein said value field comprises a label component and where said label component comprises an indication of whether each channel of said plurality of channels is available for use in a label switched path* (See claim 1, lines 8-10.) However, the specification describes “the composite label allows a signaling protocol to establish entire fiber/Lambda and/or sub- Lambda paths using a single end-to-end Label Mapping message without having to run recursive instances of the signaling protocol,” (See page 13, lines 12-14.) The specification does not describe whether each channel is available, it merely outlines the type of channel, no mention of its current capacity or lack thereof is made. Further clarification is requested.

### *Claim Rejections - 35 USC § 103*

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-10, 16, 18-20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fatehi et al. (US 6,600,583 B1), hereinafter referred to as Fatehi, in view of Jamoussi (Internet Draft, "Constraint-Based LSP Setup Using LDP"), and Fatehi in view of Chang et al. (US 6,111,673), hereinafter referred to as Chang.

Regarding claims 1-3, 6, 9, 10, 16, 19, 20, 22, and 23 Fatehi discloses an optical Internet router that uses optical tags to send and receive command and response messages between routers of an optical network, which comprises:

*Assigning an optical label to a channel group, said channel group using one of said fiber optic links and comprising a plurality of channels* (Referring to Figure 13, the available wavelength update message corresponds to series of channels utilizing fiber optic links. See column 8, lines 54-63;)

Fatehi does not disclose *each label representing an ingress to egress mapping*.

Chang teaches route-based flow tag assignment, in which the tag-switch state assigned refers to the end-to-end route that is computed dynamically at the tag-switch state setup phase in order to meet the Quality-of-Service requirements for each individual tag-switched states (See column 14, lines 58-63.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the dynamic routing of Chang in the system of Fatehi. One of ordinary skill in the

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art at the time of the invention would have been motivated to do so in order to route optical packets that does not require the use of dedicated source/destination wavelengths as taught by Fatehi (See column 2, lines 1-3.)

Fatehi further discloses *encoding said optical label so as to comprise a value field, where said value field comprises a label component and where said label component comprises an indication of whether each channel of said plurality of channels is available for use in a label switched path* (Referring to Figure 13, the available wavelength update message updates the router with number of wavelengths available at the router to the intended router **1304** and the ID of the available wavelengths **1305-1307**. See column 8, lines 54-63.)

Fatehi does not disclose *encoding said optical label to comprise a type field, a length field and a value field*.

Jamoussi teaches a method of constraint based routing (CR) in MPLS, which defines TLV encoding that includes a type, length, and value field (See page 15, section 4.3.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the router messaging system of Fatehi utilizing the MPLS method of Jamoussi. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to optically tag and read messages without sacrificing transmission efficiency and throughput capacity in heterogeneous systems. An added benefit of doing so would allow one to comply with the well-known standard of MPLS.

Regarding claim 4 as explained in the rejection statement of claim 3, the primary references teach all of the limitations of claim 3 (parent claim).

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Fatehi does not disclose *wherein current availability of bandwidth on each of said plurality of channels is represented by a single bit.*

Fatehi teaches the available wavelength update message updates the router with the number of wavelengths available at the router to the intended router **1304** and the ID of the available wavelengths **1305-1307** (See column 8, lines 54-63.)

It would have been obvious to one of ordinary skill at the time of the invention to implement the ID of available wavelength of Fatehi as a single bit. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to reduce system complexity when only two wavelengths are utilized.

Regarding claim 5 as explained in the rejection statement of claim 3, the primary references teach all of the limitations of claim 3 (parent claim).

Fatehi does not disclose *wherein a bit value of zero for said single bit indicates currently available bandwidth on a given one said plurality of channels.*

Fatehi teaches the available wavelength update message updates the router with the number of wavelengths available at the router to the intended router **1304** and the ID of the available wavelengths **1305-1307** (See column 8, lines 54-63.)

It would have been obvious to one of ordinary skill at the time of the invention to implement the ID of available wavelength of Fatehi as a single bit, thereby having an ID value of zero representing a first available channel. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to reduce system complexity when only two wavelengths are utilized.

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Regarding claim 7, the primary reference further teaches *wherein said attribute comprises an indication of a service type of said second network* (Referring to Figure 13, number of wavelengths available at the router to the intended router **1304**.)

Regarding claim 8, the primary reference further teaches *wherein said attribute comprises an indication of a control protocol of said second network* (Referring to Figure 13, address of intended router to receive this message **1303**.)

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-10, 16, 18-20, 22, and 23 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

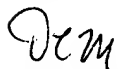
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Mills whose telephone number is 571-272-3094. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Donald L Mills



February 20, 2006



**JOHN PEZZLO**  
**PRIMARY EXAMINER**